

AMENDMENTS TO THE CLAIMS

1. (Currently amended) A stable resonator for solid-state lasers with a laser rod which exhibits a thermally induced positive lensing effect, a rear mirror and a semi-reflecting output mirror, wherein the rear mirror is convex, the end of the laser rod facing the rear mirror is also convex, and the output mirror is arranged a short distance from the other end of the laser rod, so that the laser rod ~~is~~ is arranged asymmetrically between the output mirror and the rear mirror.

2.-3. (Canceled)

4. (Previously presented) A stable resonator for solid-state lasers with a laser rod which exhibits a thermally induced positive lensing effect, a rear mirror and a semi-reflecting output mirror, wherein the rear mirror is convex, the end of the laser rod facing the rear mirror is planar, the other end of the laser rod is convex, and the output mirror is formed by the other end of the laser rod, wherein this end is semi-reflecting.

5. (Previously presented) A stable resonator for solid-state lasers with a laser rod which exhibits a thermally induced positive lensing effect, a rear mirror and a semi-reflecting output mirror, wherein the rear mirror is convex, the end of the laser rod facing the rear mirror is planar, the other end of the laser rod is convex, and the output mirror is arranged a short distance from the other end of the laser rod, so that the laser rod is arranged asymmetrically between the output mirror and the rear mirror.

6. (Previously presented) The resonator according to claim 1, wherein the laser rod is Nd:YAG, Er:YAG, Ho:YAG, or Nd:glass rod.

7. (Previously presented) The resonator according to claim 5, wherein the laser rod is Nd:YAG, Er:YAG, Ho:YAG, or Nd:glass rod.

8. (Previously presented) The resonator according to claim 4, wherein the laser rod is Nd:YAG, Er:YAG, Ho:YAG, or Nd:glass rod.

9. (Canceled)

10. (Previously presented) The resonator according to claim 1, wherein the output mirror is arranged at a distance of less than approximately 10 mm to the other end of the laser rod.

11. (Previously presented) The resonator according to claim 5, wherein the output mirror is arranged at a distance of less than approximately 10 mm to the other end of the laser rod.

12. (New) The resonator of claim 1, wherein the semi-reflecting output mirror is integral with an end of the laser rod.

13. (New) The resonator of claim 1, wherein the semi-reflecting output mirror is planar.

14. (New) The resonator of claim 4, wherein the semi-reflecting output mirror is planar.

15. (New) The resonator of claim 5, wherein the semi-reflecting output mirror is planar.

16. (New) A laser for producing a laser beam comprising:
a resonator comprising a convex mirror and a semi-reflecting mirror; and
a portion of lasing material that is disposed within the resonator;
wherein the laser has a change in a focus diameter of the laser beam of less than 2 %
for a pump power change of at least one 1.0 kilowatts.

17. (New) The laser of claim 16, wherein the laser has a change in a focus diameter of the laser beam of less than 9.1% for a pump power change of 2.0 kilowatts.

18. (New) The laser of claim 16, wherein the semi-reflecting mirror has a planar curvature.

19. (New) The laser of claim 16, wherein the end of the portion of the lasing material that is proximate to the convex mirror has a convex curvature.

20. (New) The laser of claim 16, wherein the end of the portion of the lasing material that is proximate to the convex mirror has a planar curvature.

21. (New) The laser of claim 16, wherein the end of the portion of the lasing material that is distant from the convex mirror has a convex end.

22. (New) The laser of claim 16, wherein the portion of the lasing material is asymmetrically disposed within the resonator.

23. (New) The laser of claim 16, wherein the portion of the lasing material has a thermally induced positive lensing effect.

24. (New) The laser of claim 16, wherein the semi-reflecting mirror is located on an end of the portion of the lasing material.

25. (New) The laser of claim 16, wherein the portion of the lasing material is a laser rod.

26. (New) The laser of claim 16, wherein the portion of the lasing material comprises one of Nd:YAG, Er:YAG, Ho:YAG, and Nd:glass.

27. (New) The laser of claim 16, wherein the semi-reflecting mirror is located less than 10 mm from the portion of the lasing material.